

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 34. (Cancelled)

35. (Currently Amended) A method of ~~obtaining a sample of substantially pure~~ enriching for liver stem cells comprising, isolating a liver cell cluster from liver tissue to yield a population of clusters, said cluster comprising a stem cell associated with a hepatocyte, wherein said cluster consists essentially of a total of 2 to 5 cells at least one of which is a stem cell associated with a hepatocyte and wherein said stem cell comprises comprising an OV6 antigen and ~~lacks~~ lacking an OC2 antigen, and wherein said population of clusters is enriched for liver stem cells compared to said liver tissue.

36. (Currently Amended) The method of claim 35, comprising the step of enriching for periportal hepatocytes associated with the biliary tree, wherein said step of enriching occurs prior to said isolating said liver cell cluster from liver tissue.

37. (Original) The method of claim 35, wherein said liver cell cluster is a cell doublet.

38. (Original) The method of claim 35, wherein said liver cell cluster is derived from the canal of Hering of an adult liver.

39. (Currently Amended) The method of claim 35, further comprising selecting for expression of desmoplakin, wherein said selecting for expression of desmoplakin occurs after said isolating said liver cell cluster from liver tissue.

40. (Currently Amended) The method of claim 35, further comprising selecting for expression of OV6, wherein said selecting for expression of OV6 occurs after said isolating said liver cell cluster from liver tissue.

41. (Original) The method of claim 35, further comprising selecting for a cell which expresses an antigen selected from the group consisting of laminin, desmoplakin I, CCAM, CEA, dipeptidyl peptidase-4, .gamma.GT, VLA-2, VLA-3, VLA-5, and VLA-6.
42. – 49. (Cancelled)
50. (Previously Added) The method of claim 35, wherein said liver tissue is fetal liver tissue.
51. (Previously Added) The method of claim 35, wherein said liver tissue is pediatric liver tissue.
52. (Previously Added) The method of claim 35, wherein said liver tissue is adult liver tissue.
53. (Previously Added) The method of claim 35, wherein said liver tissue is obtained from a mouse, rat, dog, baboon, or pig.
54. (Previously Added) The method of claim 35, wherein said liver tissue is obtained from a human.
55. (Previously Added) The method of claim 35, wherein said liver tissue is obtained from a living or deceased donor.
56. (Previously Added) The method of claim 35, wherein said liver tissue is normal liver tissue.
57. (Previously Added) The method of claim 35, wherein said cluster is isolated from said liver tissue prior to a mechanical injury or exposure to a carcinogen.
58. (Currently Amended) The method of claim 35, wherein said sample population of clusters comprises at least 60% doublets.

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59. (Currently Amended) The method of claim 35, wherein said sample population of clusters comprises at least 90% doublets.

60. (Currently Amended) The method of claim 35, wherein said sample population of clusters comprises at least 99% doublets.

61. (Currently Amended) The method of claim 35, further comprising dissociating said stem cell from said hepatocyte and removing said hepatocyte to yield an population of isolated stem cells to yield a sample of substantially pure liver stem cells.

62. – 64. (Cancelled)

65. (New) The method of claim 35, wherein said stem cell is joined to said hepatocyte by a desmosomal junction.

66. (New) The method of claim 35, wherein said cluster consists essentially of a total of 3 to 5 cells at least two of which are stem cells associated with a hepatocyte.

67. (New) The method of claim 66, wherein at least one of said stems cells is joined to said hepatocyte by a desmosomal junction.